REMARKS

Claims 1-27 are pending in the above-identified application. In the present Office Action, the Drawings are objected to because of minor formatting issues. The Specification is objected to because of the same minor formatting issues identified with respect to the Drawings. Claims 1, 3, 4, 7, 13, 21, 22 and 24 are objected to primarily because of problems with the antecedent basis of some elements. Claims 1-20 are objected to under 35 U.S.C. §112 because of problems with antecedent basis. Claims 1-27 are rejected under 35 U.S.C. §101 because the claimed invention is allegedly directed to non-statutory subject matter. Claims 1, 3, 4, 7, 8, 10, 12, 13, 15-18 and 20 are rejected under §102(b) as being anticipated by Chandra et al. ("An Online Optimization-based Technique for Dynamic Resource Allocation in GPS Servers," Technical Report UM-CS-2002-030, University of Massachusetts, July 2002; hereinafter referred to as "Chandra"). Claims 2, 9, 11, 14, 19, 21-27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chandra in view of Nagarajan et al. ("Modelling and Simulation of an Alarm Based Network Management System for Effective SLA Monitoring and Management," SCI 2003, 7th World Multiconference on Systemics, Cybernetics and Informatics Proceedings, July 27-30, 2003; hereinafter referred to as "Nagarajan"). Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Chandra in view of Chan (U.S. Patent No. 6,466,898). Claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Chandra in view of Sheets et al. (U.S. Patent No. 6,816,905; hereinafter referred to as "Sheets").

Applicants submit that these amendments and remarks overcome all of the Examiner's outstanding rejections and objections and bring the present Application into condition for allowance. Entry of this amendment and a notice of allowance of all claims are therefore respectfully solicited.

Objections to the Drawings

Figures 2-4 are amended to remove one element that was not described in the Specification and to clarify the numbering associated with various elements, e.g. the number range "103-8" is modified to "103-108." Applicants believe that these modifications resolve all the current Objections to the Drawings and respectfully request both entry of the Amendments and approval of the Drawings.

Objections to the Specification

In accordance with suggestions made in the current Office Action (O.A.), paragraphs [0021], [0024], [0028], [0036], [0037], [0038], [0039], [0042] and [0044] are amended to change the format of the numbering associated with various elements, e.g. the number range "103-8" is modified to "103-108." No new matter has been added to the Specification with these Amendments, which merely serve to clarify elements in specific ranges. Applicants believe that these modifications resolve all the current Objections to the Specification and respectfully request entry of the Amendments and withdrawal of the Objections.

Objections to the Claims

In accordance with suggestions made in the current Office Action (O.A.), claims 1, 3, 4, 7, 13, 21, 22 and 24 are amended to address minor informalities identified in the O.A. These Amendments do not change the scope of the claims but merely address issues associated with punctuation and with mismatched elements. Applicants believe that these modifications resolve all the current Objections to the Specification and respectfully request entry of the Amendments and withdrawal of the Objections.

Rejections Based Upon §112

Claims 1, 2, 6, 9, 13-16 and 19 are amended to address issues related to antecedent basis identified in the O.A. These Amendments do not change the scope of the claims but merely clarify that which Applicants' consider the claimed technology. Applicants believe that these modifications resolve the rejections based upon §112 and respectfully request entry of the Amendments and withdrawal of the §112 rejections.

Rejections Based on §101

The O.A. rejects claims 1-20 under §101, stating that "[c]laims 1-20 are directed to a method of predicting service in a utility computing environment." (O.A., p. 6, note 33). Applicants believe this statement overly simplifies and mischaracterizes the claimed subject matter. Specifically, the claimed subject matter is directed, not merely to the prediction of service in a utility computing environment, but employing those predictions to modify a service level agreement (SLA). A SLA is a real world application that controls the distribution and allocation of real world resources in a utility computing environment (UCE). In general, a SLA is a contract that specifies a computing need and the resources allocated to meet that need. As such, a SLA imposes obligations on the parties to the SLA and controls the administration of computer resources, both of which are real world applications.

Claim 1 is directed to the modification of a resource profile, which is claimed as "corresponding to a subset of computing resources allocated according to a service level agreement." Clearly, the modification of a resource profile of a SLA in effect modifies, or redefines, the SLA and thus produces a useful, tangible and non-abstract result having a real world value. Thus, Applicants request the withdrawal of the §101 rejections of claims 1-20.

With respect to claim 13, an Amendment addresses the issue raised in the O.A. that the only thing produced is "a service level result." (O.A., p. 7, line 1) by amending the claim to provide logic for modifying "the allocated subset of the available computing resources based upon the service level result." As explained above with respect to claims 1-20, a modification a the allocated subset in effect modifies the associated SLA and therefore produces useful, tangible and non-abstract result having a real world value. Thus, Applicants request the withdrawal of the §101 rejections of claims 21-27.

Claim 21 is amended to clarify that the claimed logic, in addition to being stored on a memory, is for "execution on a processor." Applicants believe this addresses the issues raised in the O.A. and, in conjunction with the comments made above with respect to claims 1-20 relating to the useful, tangible and non-abstract nature of the claims, renders claims 21-27 allowable. Therefore, Applicants respectfully request withdrawal of the §101 rejections of claims 21-27.

Rejections Based on §102(b)

Claims 1, 3, 4, 7, 8, 10, 12, 13, 15-18 and 20 are rejected under §102(b) as being anticipated by Chandra et al. ("An Online Optimization-based Technique for Dynamic Resource Allocation in GPS Servers," Technical Report UM-CS-2002-030, University of Massachusetts, July 2002; hereinafter referred to as "Chandra").

Basically, Chandra is directed to "online workload predictions and optimization-based techniques to **dynamically allocate resources** to competing web applications running on shared servers." (p. 1, Abstract, lines 8-11; *emphasis added*). In other words, Chandra addresses resource allocation in a shared computing environment. In contrast, Applicants' claimed subject matter is directed at **modifying a service level agreement** rather than the actual allocation of resources while in the process of providing those resources. While Chandra addresses techniques for the reallocation of resources among competing users, perhaps for the purpose of providing resources to satisfy a particular agreement, there is no teaching or suggestion directed to modifying an agreement such as a SLA.

Applicants claimed subject matter is concerned with issues relating to the modification of an SLA to ensure that a specific SLA closely matches a particular client's requirements. In contrast, Chandra is directed to the issue of how to provide resources in light of a particular agreement. The modification of an agreement to satisfy a user's requirement and the allocation of resources to satisfy a particular agreement are two distinctly different issues and Chandra simply does not address the former.

For the reasons above, independent claims 1 and 13 are allowable over the cited art. In addition, dependent claims 3, 4, 7, 8, 10, 12, 15-18 and 20 are allowable because they each depend upon one of the allowable independent claims. Therefore, Applicants respectfully request withdrawal to the §102(b) rejections of claims 1, 3, 4, 7, 8, 10, 12, 13, 15-18 and 20.

Rejections Based on §103(a)

Claims 2, 9, 11, 14, 19, 21-27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chandra in view of Nagarajan et al. ("Modelling and Simulation of an Alarm Based Network Management System for Effective SLA Monitoring and Management," SCI 2003, 7th World Multiconference on Systemics, Cybernetics and Informatics Proceedings, July 27-30, 2003; hereinafter referred to as "Nagarajan"). Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Chandra in view of Chan (U.S. Patent No. 6,466,898). Claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Chandra in view of Sheets et al. (U.S. Patent No. 6,816,905; hereinafter referred to as "Sheets").
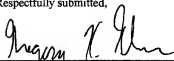
Like Chandra, Nagarajan is directed to different issues than Applicants' claimed subject matter. Nagarajan focuses on SLA management and monitoring from the system perspective rather than form the user's perspective. In other words, Nagarajan is concerned with whether or not a particular system may provide requested services rather than whether or not a particular user actually needs those services. This difference means that neither Chandra nor Nagarajan suggests specific claimed elements of Applicants' claimed subject matter, i.e. "resource list," "allocated resource list," "demand profile," and "workload profile." From the perspective of Chandra and Nagarajan combined these elements are not addressed. For example, the O.A. relies upon a "monitoring module," a "prediction module" and an "allocation module" (Chandra, p. 3, III. ¶1) to anticipate some or all of these elements although the implied correspondence is not clear from the O.A.. Applicants contend that these comparisons mischaracterize Applicants claimed elements and that neither Nagarajan nor any of the other cited art provides that which Chandra lacks.

To establish *prima facie* obviousness of a claimed invention under §103(a), all the claim limitations must be taught or suggested by the prior art. (M.P.E.P., §2143,03, citing *in re Royka*, 490 F.2d 981; 180 U.S.P.Q. 580 (CCPA 1974)). In addition, **"All words in a claim must be considered"** in judging the patentability of that claim against prior art." (*Id.*, citing *In re Wilson*, 424 F.2d 1382, 1385; 165 U.S.P.Q. 494, 496 (CCPA 1970); *emphasis added*). Applicants believe that the cited art fails to meet this standard. For the reasons above, independent claim 21 is allowable over the cited art. In addition, dependent claims 2, 9, 11, 14, 19 and 22-27 are allowable because they each depend upon one of the allowable independent claims.

CONCLUSION

In light of the amendments and remarks made herein, Applicants submit that all pending claims are allowable and earnestly solicits notice thereof. A Request for a One-Month Extension of Time is being filed and paid for electronically in conjunction with this Response so that Applicants have until July 9, 2007 to respond. It is believed that no other fees are due with the filing of this Amendment/Response. However, should any other fees be due, the Commissioner is hereby authorized to charge such fees to the deposit account of IBM Corporation, Deposit Account No. 09-0447.

Respectfully submitted,

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